

Abstract of the Disclosure

Fuel cell modules are assembled in receiver sections of an assembly in a power generation system. Both fuel and reactant gas feed and return lines provide leak-tight shutoff of all porting connections to the modular fuel cell by using failsafe (spring-loaded to the closed or "off" position) cartridge-type plug valves in the headers. The fuel and air ports of gas distribution manifolds on the ends of the module connect to distribution headers using a low compression face seal that is maintained in compression by providing tapered mating surfaces between the manifolds and headers. Through the insertion of a module in a receiving section, the flow control valves are actuated at the header distribution ports, the manifold ports are aligned with the header ports with their seals placed in compression and an electrical connection is established between electrical plugs protruding from the module and the base of the receiving section.